ABSTRACT

The present invention relates to the polypeptides known as muscle calcineurin interacting proteins (MCIPs). These molecules binding to calcineurin and, in so doing, modulate its functions, which includes phosphate removal as part of a pathway coupling Ca^{2+} to cellular responses in muscle. MCIPs form a physical complex with the catalytic subunit of calcineurin, and increased levels of MCIPs correspond to a reduced ability of calcineurin to stimulate transcription of certain target genes. Methods to exploit these observation are provided and include screening for modulators of MCIP expression and binding to calcineurin, methods of diagnosis of MCIP defects, and methods for treating cardiomyopathies, including cardiac hypertropy.